

ABSTRACT

A method wherein a viscous treatment substance is injected into a diseased portion of body tissue for the purpose of localizing tissue necrosis by resisting substance migration. The treatment substance injected is in the form of a gel, or alternatively in the form of microspheres. Localized treatment is further enhanced by including a conductive component in the treatment substance, and while injecting the substance, simultaneously applying RF (radio frequency) energy to an injection needle acting as an RF electrode. The conductive gel serves as an extension of the electrode, thereby localizing and enhancing treatment in the tissue penetrated by the gel. Improved positioning of the injection needle is aided with the use of ultrasound imaging with clarity enhanced by inclusion of imaging enhancement agents in the gel. Alternatively, microspheres are filled with a gel/solution and gas combination providing contrasting areas of ultrasound reflection.